



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,195	02/16/2001	David J. Gemmell	MCS-067-00	1755
27662 7590 01/12/2007 MICROSOFT CORPORATION C/O LYON & HARR, LLP 300 ESPLANADE DRIVE SUITE 800 OXNARD, CA 93036			EXAMINER JACOBS, LASHONDA T	
			ART UNIT 2157	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/12/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 09/681,195	Applicant(s) GEMMELL, DAVID J.	
	Examiner LaShonda T. Jacobs	Art Unit 2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on October 13, 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 18-27, 35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18-27, 35 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This is a Final Office Action in response to Applicant's Amendment/Request for Reconsideration filed on October 13, 2006. Claims 1-16, 18-27, 35 and 36 are presented for further examination.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-16, 18-27, 35 and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Tillman et al (hereinafter, "Tillman", 6,496,980).

As per claim 1, Tillman discloses a computer-implemented process for obtaining progressively higher quality versions of an audio-only program, video-only program, or audio and video over a client-server based network, comprising a client computer performing the process actions of:

- requesting a base quality version of the program from a server over the network, wherein the base quality version of the program comprises at least a layer data of a layered unicast having hierarchically related layers in that the lowest level layer is a

Art Unit: 2157

base layer and each subsequently higher level layer adds enhancing information for enhancing the quality of the program that can be rendered from the layers preceding it in the hierarchy, and wherein requesting a base quality version of the program from a server over the network comprises requesting as many layers in the order of their position in the hierarchy starting with the base layer, as can be transmitted from the server to the client without exceeding the available bandwidth of the network (abstract, col. 2, lines 47-59, col. 4, lines 54-57, col. 5, lines 25-44, col. 6, lines 14-22 and col. 10, lines 10-21);

- receiving and caching the requested layer data associated with the base quality version of the program (col. 7, lines 36-50);
- requesting at least one enhancement layer of the layered unicast from the server over the network (col. 7, lines 36-50, col. 8, lines 13-16 and col. 9, lines 11-20);
- receiving and caching the requested enhancement layer data (col. 9, lines 11-20, lines 58-67 and col. 10, lines 1-7); and
- combining the requested enhancement layer data with the previously cached layer data associated with the base quality version of the program as it is received to produce a higher quality version of the program (col. 9, lines 11-20 and lines 44-57).

As per claim 2, Tillman further discloses:

- rendering the base quality version of the program as the requested data is received and presenting it to the user (col. 9, lines 11-20 and lines 44-57).

As per claim 3, Tillman further discloses:

Art Unit: 2157

- determining if the user directs that the presentation of the base quality version of the program be terminated (col. 10, lines 57-67 and col. 11, lines 15); and
- terminating the presentation of the base quality version of the program to the user (col. 10, lines 57-67 and col. 11, lines 15).

As per claim 4, Tillman discloses:

- wherein the process action of terminating the presentation comprises the action of terminating the incoming data stream associated with the requested base quality version of the program (col. 10, lines 57-67 and col. 11, lines 15).

As per claim 5, Tillman discloses:

- wherein the process action of terminating the presentation comprises the actions of stopping the rendering of the base quality version of the program, while continuing to receive and cache the incoming data stream associated with the requested base quality version of the program (col. 10, lines 57-67 and col. 11, lines 15).

As per claim 6, Tillman further discloses:

- a process action of rendering the higher quality version of the program from the combined layer data and presenting it to the user (col. 9, lines 11-20 and lines 44-57).

As per claim 7, Tillman further discloses:

- determining if the user directs that the presentation of the higher quality version of the program be terminated (col. 10, lines 57-67 and col. 11, lines 15); and
- terminating the presentation of the higher quality version of the program to the user (col. 10, lines 57-67 and col. 11, lines 15).

As per claim 8, Tillman discloses:

Art Unit: 2157

- wherein the process action of terminating the presentation comprises the action of terminating the incoming data stream associated with the requested higher quality version of the program (col. 10, lines 57-67 and col. 11, lines 15).

As per claim 9, Tillman discloses:

- wherein the process action of terminating the presentation comprises the actions of stopping the rendering of the higher quality version of the program, while continuing to receive and cache the incoming data stream associated with the requested higher quality version of the program (col. 10, lines 57-67 and col. 11, lines 15).

As per claim 10, Tillman discloses:

- wherein the process actions of requesting at least one enhancement layer, receiving and caching the requested enhancement layer data and combining the requested enhancement layer data with the previously cached layer data associated with the base quality version of the program as it is received to produce said higher quality version of the program, are performed only when a user directs the client to provide a higher quality version of the program in comparison to the base quality version (col. 7, lines 36-50, col. 9, lines 11-20 and lines 44-57).

As per claim 11, Tillman discloses:

- wherein the process actions of requesting at least one enhancement layer, receiving and caching the requested enhancement layer data and combining the requested enhancement layer data with the previously cached layer data associated with the base quality version of the program as it is received to produce said higher quality version of the program, are performed automatically once all the requested layer data associated

Art Unit: 2157

with the base quality version of the program has been received and cached (col. 7, lines 36-50, col. 9, lines 11-20 and lines 44-57).

As per claim **12**, Tillman further discloses:

- requesting at least one additional enhancement layer of the layered unicast from the server over the network (col. 7, lines 36-50, col. 8, lines 13-16 and col. 9, lines 11-20);
- receiving and caching the requested additional enhancement layer data (col. 9, lines 11-20, lines 58-67 and col. 10, lines 1-7); and
- combining the requested additional enhancement layer data with the previously cached layer data associated with the base and higher quality versions of the program as it is received to produce an enhanced higher quality version of the program (col. 9, lines 11-20 and lines 44-57).

As per claim **13**, Tillman further discloses:

- ascertaining whether the server has any remaining enhancement layers associated with the program available (col. 10, lines 43-56); and
- whenever it is ascertained that the server has at least one remaining enhancement layer associated with the program (col. 10, lines 43-56),
- requesting at least one additional enhancement layer of the layered unicast from the server over the network (col. 7, lines 36-50, col. 8, lines 13-16 and col. 9, lines 11-20),
- receiving and caching the requested additional enhancement layer data (col. 9, lines 11-20, lines 58-67 and col. 10, lines 1-7), and
- combining the requested additional enhancement layer data with the previously cached layer data associated with the base and higher quality versions of the program as it is

Art Unit: 2157

received to produce an enhanced higher quality version of the program (col. 9, lines 11-20 and lines 44-57).

As per claim **14**, Tillman discloses:

- wherein the process actions of requesting at least one additional enhancement layer, receiving and caching the requested additional enhancement layer data and combining the requested additional enhancement layer data with the previously cached layer data associated with the base and higher quality versions of the program to produce said enhanced higher quality version of the program, are performed only when a user directs the client to provide the enhanced higher quality version of the program (col. 7, lines 36-50, col. 9, lines 11-20 and lines 44-57).

As per claim **15**, Tillman discloses:

- wherein the process actions of requesting at least one additional enhancement layer, receiving and caching the requested additional enhancement layer data and combining the requested additional enhancement layer data with the previously cached layer data associated with the base and higher quality versions of the program to produce said enhanced higher quality version of the program, are performed automatically once all the requested layer data associated with the higher quality version of the program has been received and cached (col. 7, lines 36-50, col. 9, lines 11-20 and lines 44-57).

As per claim **16**, Tillman further discloses:

- informing the user that an enhanced higher quality version of the program cannot be provided whenever it is ascertained that the server does not have any remaining enhancement layers associated with the program available (col. 10, lines 43-56).

As per claim **18**, Tillman discloses:

- wherein the process action of requesting at least one enhancement layer, comprises the action of requesting as many enhancement layers, in the order of their position in the hierarchy starting with the layer next higher in the hierarchy from the highest level layer requested in association with the base quality version of the program, as can be transmitted from the server to the client without exceeding the available bandwidth of the network (col. 6, lines 15-40, lines 53-67, col. 7, lines 1-3, lines 36-50, col. 9, lines 11-20 and lines 44-57).

As per claim **19**, Tillman discloses:

- wherein the process actions of requesting a base quality version of the program and requesting at least one enhancement layer comprises requesting that the data making up each layer be provided in its entirety (col. 7, lines 36-50, col. 9, lines 11-20 and lines 44-57).

As per claim **20**, Tillman discloses:

- wherein the process action of requesting a base quality version of the program comprises the action of requesting the data making up each layer of the base quality version in sequential, equal-sized, temporally corresponding portions such that the layer portions associated with a time segment at the beginning of the program are requested first, and then the layer portions associated with the next sequential time segment of the program are requested, and so on (col. 9, lines 11-32, lines 44-57 and col. 10, lines 43-56).

As per claim **21**, Tillman discloses:

- wherein the process action of requesting the data making up each layer of the base quality version in sequential, equal-sized, temporally corresponding portions comprises the action of requesting said layer portions from as many layers, in the order of their position in the hierarchy starting with the base layer, as can be transmitted from the server to the client without exceeding the available bandwidth of the network (col. 9, lines 11-32, lines 44-57 and col. 10, lines 43-56).

As per claim **22**, Tillman discloses:

- wherein the process action of requesting at least one enhancement layer of the program comprises the action of requesting the data making up each enhancement layer in sequential, equal sized, temporally corresponding portions such that the layer portions associated with time segment at the beginning of the program are requested first, and then the layer portions associated with the next sequential time segment of the program are requested, and so on (col. 9, lines 11-32, lines 44-57 and col. 10, lines 43-56).

As per claim **23**, Tillman discloses:

- wherein the process action of requesting the data making up each enhancement layer in sequential, equal-sized, temporally corresponding portions, comprises the action of requesting said enhancement layer portions from as many enhancement layers, in the order of their position in the hierarchy starting with the layer next higher in the hierarchy from the highest level layer requested in association with the base quality version of the program, as can be transmitted from the server to the client without exceeding the available bandwidth of the network (col. 9, lines 11-32, lines 44-57 and col. 10, lines 43-56).

Art Unit: 2157

As per claim **24**, Tillman discloses:

- wherein the length of each time segment of the program is matched to the rate at which the available bandwidth varies on the network such that each time segment is short enough that the network bandwidth does not vary significantly over the period (col. 5, lines 46-67, col. 6, lines 1-6 and lines 14-40) .

As per claim **25**, Tillman discloses a client-server based computer network for obtaining progressively higher quality versions of an audio-only program, video-only program, or audio and video, comprising:

- a client comprising at least one general purpose computing device (col. 4, lines 31-36 and lines 54-57); and,
- a computer program comprising program modules executable by the client, wherein the client is directed by the program modules to (col. 12, lines 29-34)
- receive an instruction from a user to provide the program for viewing (col. 4, lines 31-36)
- request a base quality version of the program from a server over the network, wherein the base quality version of the program comprises at least a base layer of a layered unicast having hierarchically related layers in that the lowest level layer is a base layer and each subsequently higher level layer adds enhancing information for enhancing the quality of the program that can be rendered from the layers preceding it in the hierarchy, and wherein requesting a base quality version of the program from a server over the network comprises requesting as many layers in the order of their position in the hierarchy starting with the base layer, as can be transmitted from the server to the client

Art Unit: 2157

without exceeding the available bandwidth of the network (abstract, col. 2, lines 47-59, col. 4, lines 54-57, col. 5, lines 25-44, col. 6, lines 14-22 and col. 10, lines 10-21),

- receive and cache the requested layer data associated with the base quality version of the program (col. 7, lines 36-50),
- render the base quality version of the program as the requested data is received and present it to the user (col. 9, lines 11-20 and lines 44-57),

As per claim **26**, Tillman further discloses:

- determining if the user directs that the presentation of the base quality version of the program be terminated (col. 10, lines 57-67 and col. 11, lines 15);
- whenever it is determined that the user has directed that the presentation of the base quality version of the program be terminated, terminating said presentation (col. 10, lines 57-67 and col. 11, lines 15).

As per claim **27**, Tillman discloses a computer-readable medium having computer-executable instructions that are executed on a client computer for obtaining progressively higher quality versions of an audio-only program, video-only program, or audio and video over a network, said computer-executable instructions comprising:

- requesting a base quality version of the program, wherein the base quality version of the program comprises at least a base layer of a layered unicast having hierarchically related layers in that the lowest level layer is a base layer and each subsequently higher level layer adds enhancing information for enhancing the quality of the program that can be rendered from the layers preceding it in the hierarchy, and wherein requesting a base quality version of the program from a server over the network comprises requesting as

many layers in the order of their position in the hierarchy starting with the base layer, as can be transmitted from the server to the client without exceeding the available bandwidth of the network (abstract, col. 2, lines 47-59, col. 4, lines 54-57, col. 5, lines 25-44, col. 6, lines 14-22 and col. 10, lines 10-21);

- receiving and caching the requested layer data associated with the base quality version of the program (col. 7, lines 36-50);
- rendering the base quality version of the program as the requested data is received and presenting it to the user (col. 9, lines 11-20 and lines 44-57);

As per claim 35, Tillman further discloses program modules for:

- determining if the user directs that a higher quality version of the program be provided for viewing (col. 7, lines 36-50);
- whenever it is determined that the user has directed a higher quality version of the program to be provided (col. 7, lines 36-50);
- request at least one enhancement layer of the layered unicast from the server over the network (col. 7, lines 36-50, col. 8, lines 13-16 and col. 9, lines 11-20);
- receive and cache the requested enhancement layer data (col. 9, lines 11-20, lines 58-67 and col. 10, lines 1-7); and
- combine the requested Enhancement layer data with the previously cached layer data associated with the base quality version of the program as it is received to produce the higher quality version of the program, and render the higher quality version of the program from the combined layer data and present it to the user (col. 9, lines 11-20 and lines 44-57).

Art Unit: 2157

As per claim **36**, Tillman further discloses:

- upon a user directing that a higher quality version of the program being provided, requesting at least one enhancement layer of the layered unicast from the server over the network (col. 7, lines 36-50);
- receiving and caching the requested enhancement layer data (col. 7, lines 36-50, col. 8, lines 13-16 and col. 9, lines 11-20);
- combining the requested enhancement layer data with the previously cached layer data associated with the base quality version of the program as it is received to produce a higher quality version of the program (col. 9, lines 11-20 and lines 44-57); and
- rendering the higher quality version of the program from the combined layer data and presenting it to the user (col. 9, lines 11-20, lines 44-67 and col. 10, lines 1-7).

Response to Arguments

3. Applicant's arguments filed October 13, 2006 have been fully considered but they are not persuasive.

The Office Notes the following arguments:

a. Applicant argues that Tillman does not teach requesting a base quality version of a program includes request as many layers, in order of their position in the hierarchy starting with the base layer, as can be transmitted from the server to the client without exceeding the available bandwidth of the network.

Art Unit: 2157

In response to:

a. Applicant argues that Tillman does not teach requesting a base quality version of a program includes request as many layers, in order of their position in the hierarchy starting with the base layer, as can be transmitted from the server to the client without exceeding the available bandwidth of the network. However, the Examiner disagrees. Tillman teaches receiving a base layer of the video stream in which the base layer is stored in the client cache. The client then sends a message to the server to transmit predetermined amount of video data for enhancement layer from server cache. The server will transmit as many enhancement layers based on the user input. The multiple enhancement layers received by the client system may be stored in the client cache, provided that there is available storage. Thus, a layered hierarchy of enhancement layers maybe employed, as long as the server system creates the specific configuration used and communicates this communicates configuration information to the client system (col. 9, lines 44-67, col. 10, lines 1-34). The claim does not require that by requesting a base quality version means requesting base quality version in which the base quality version comprises many layers. By giving the broadest interpretation of the present application's claim language, Tillman does teach requesting a base quality version of a program includes request as many layers, in order of their position in the hierarchy starting with the base layer, as can be transmitted from the server to the client without exceeding the available bandwidth of the network.

Conclusion

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

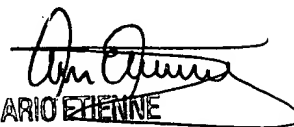
Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaShonda T. Jacobs whose telephone number is 571-272-4004. The examiner can normally be reached on 8:30 A.M.-5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ltj
January 7, 2007

LaShonda T Jacobs
Examiner
Art Unit 2157


ARIO ETIENNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100